FIG.1A

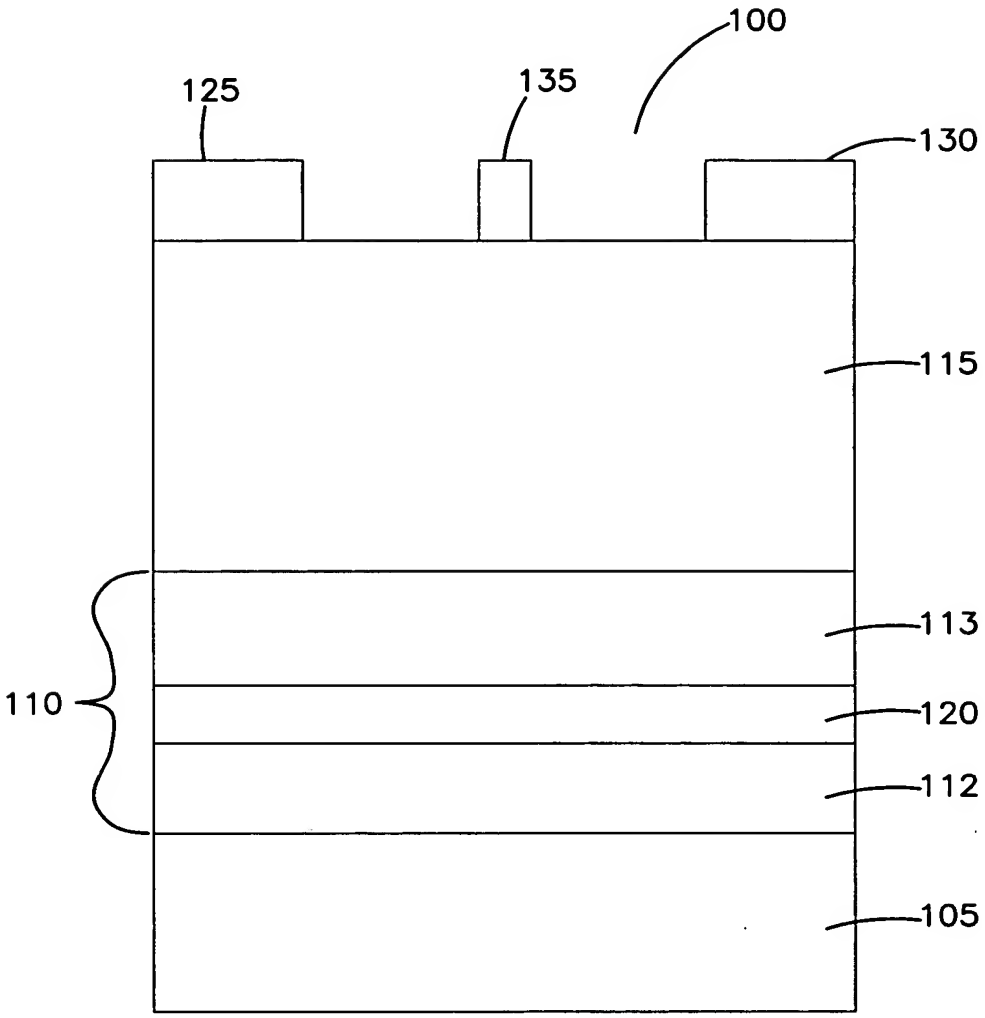


FIG. 1B

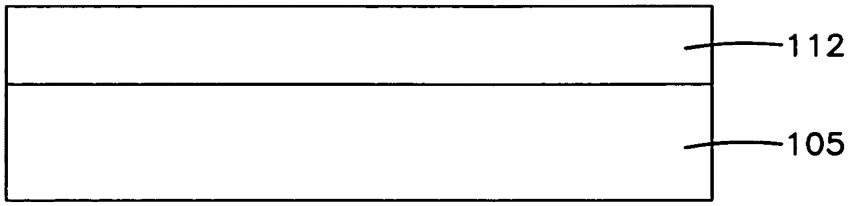


FIG. 1C

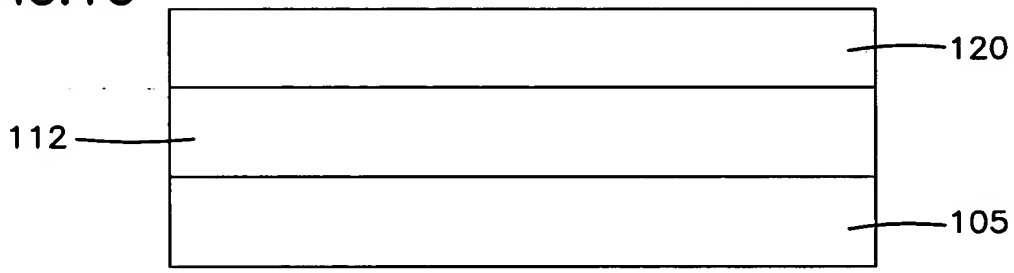


FIG. 1D

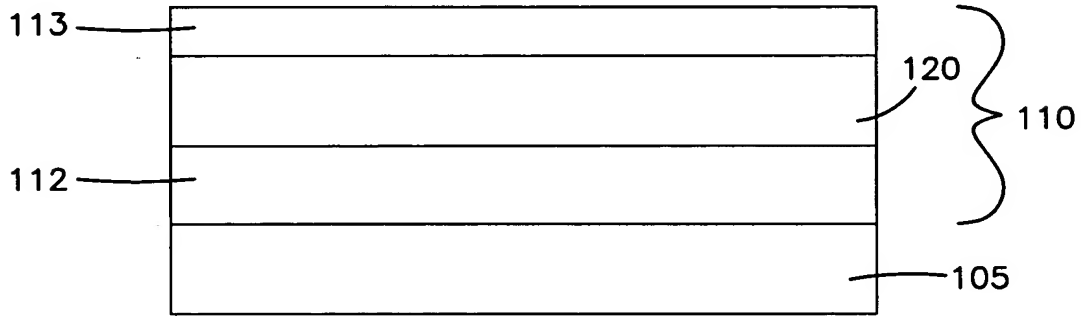


FIG. 1E

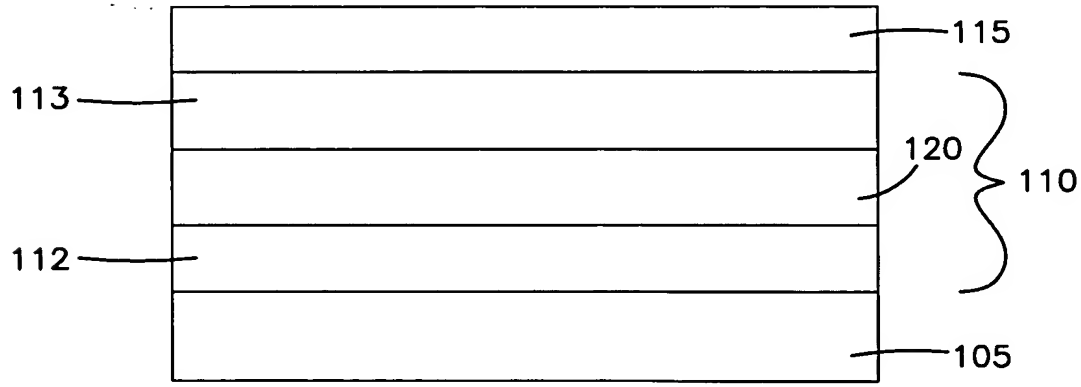


FIG.1F

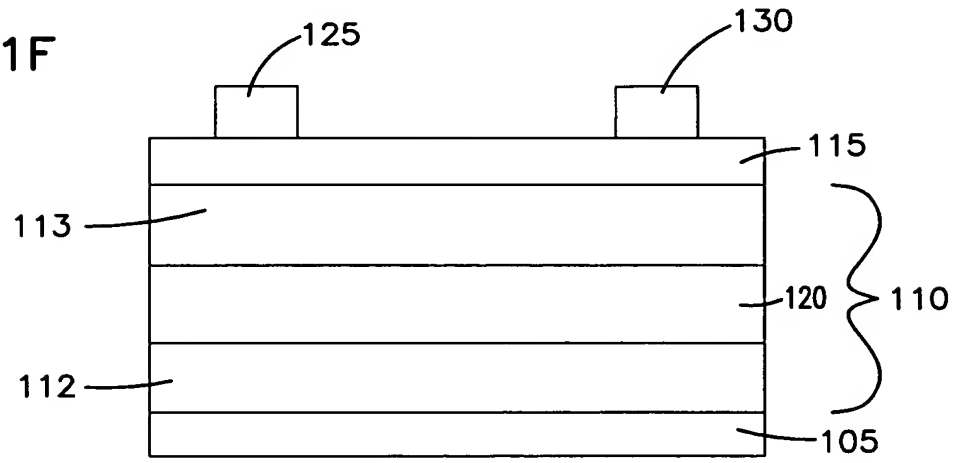


FIG.1G

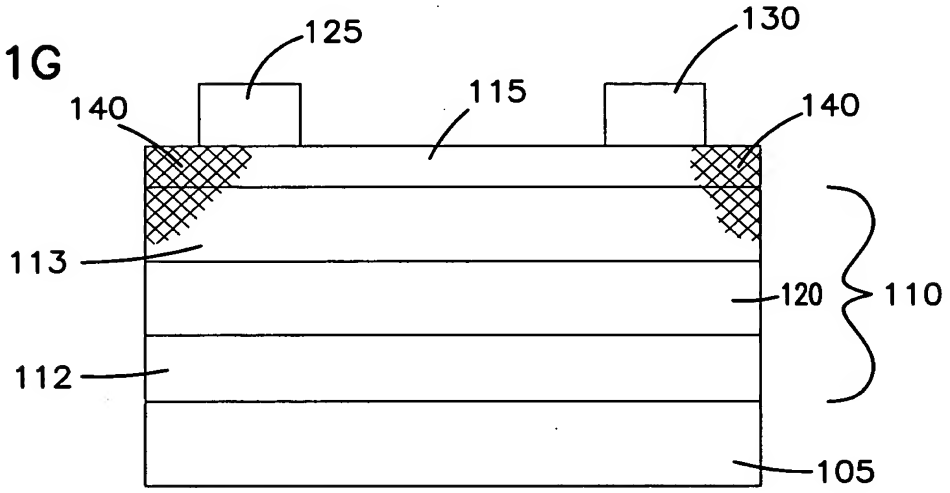


FIG.1H

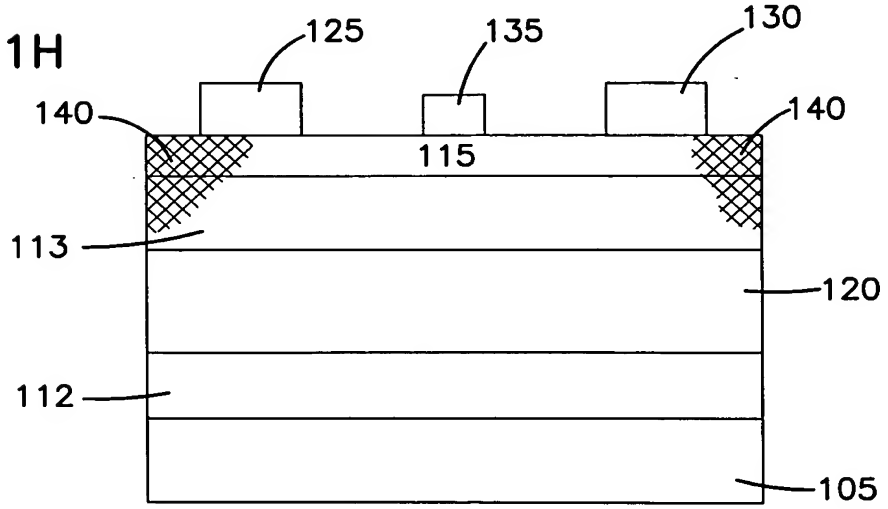


FIG.2

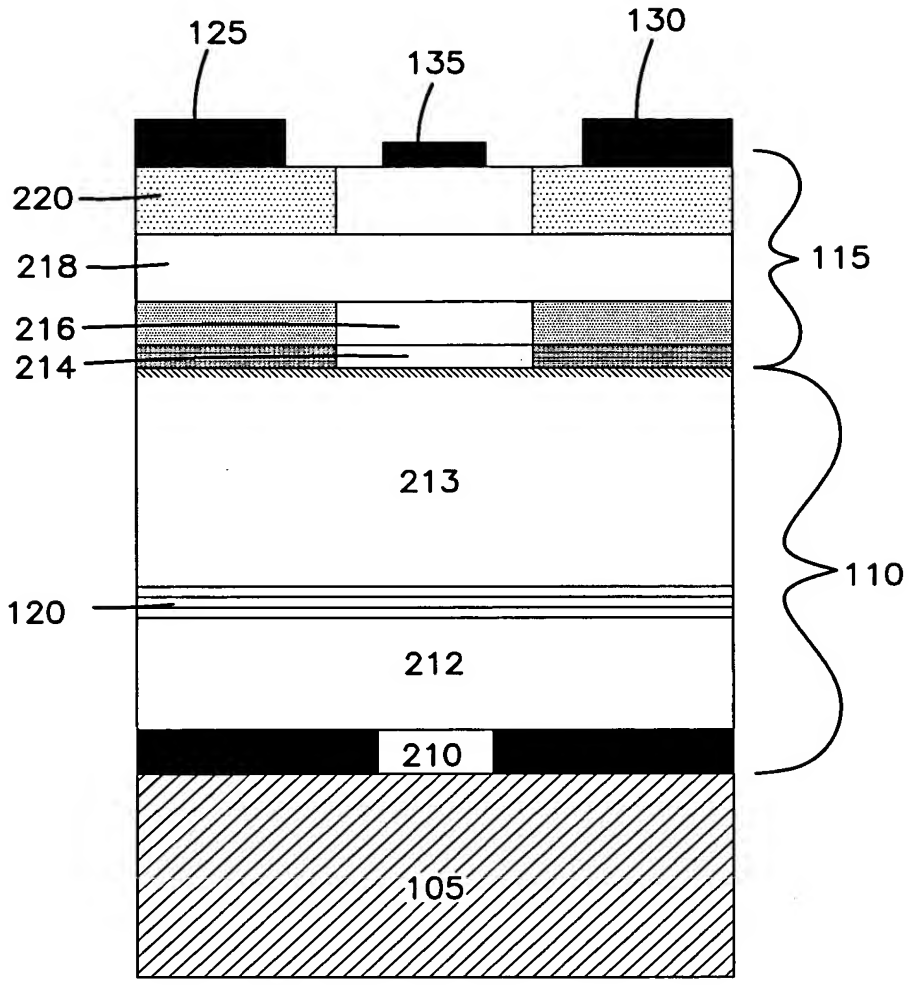


FIG.3

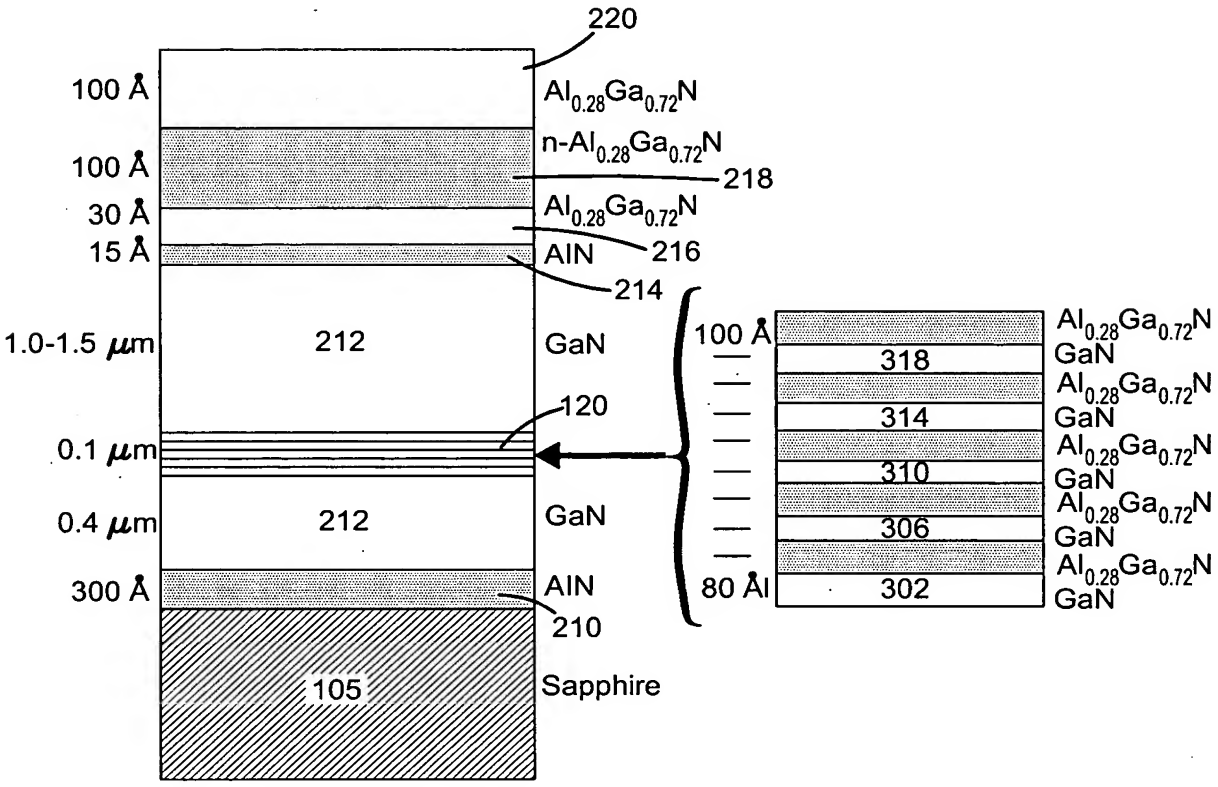


FIG.4

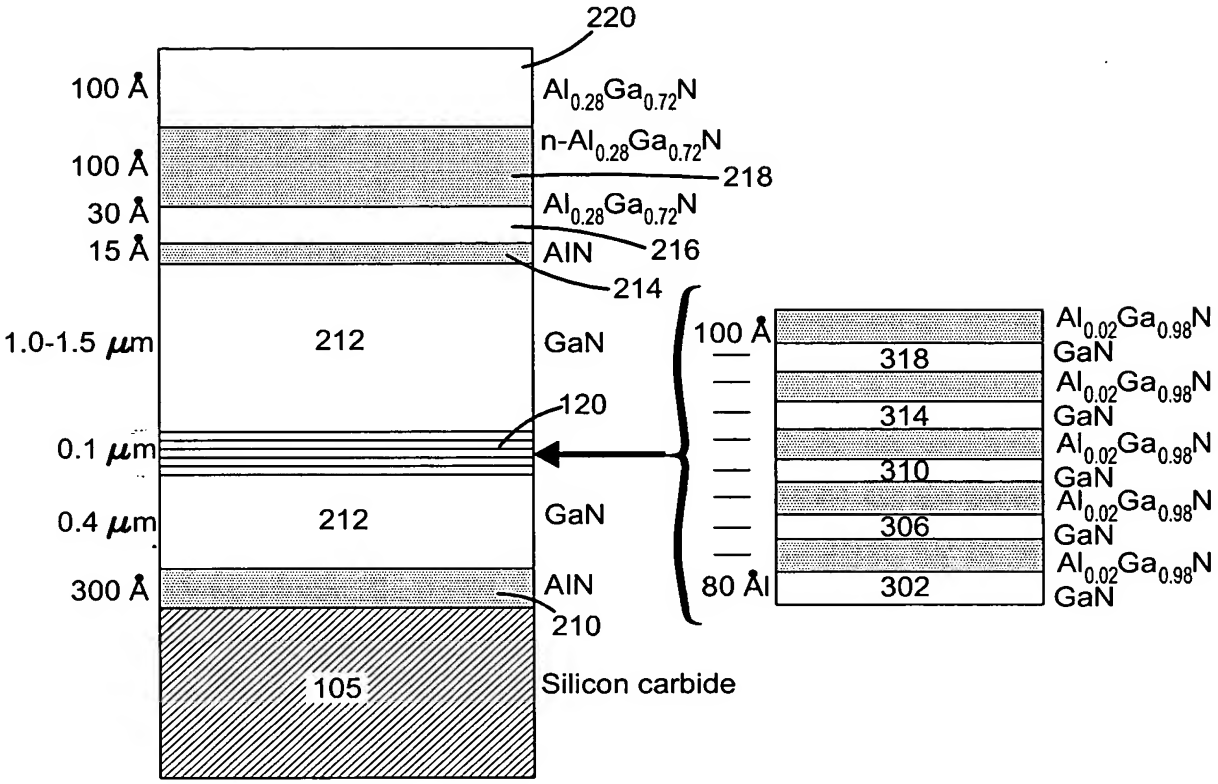


FIG.5

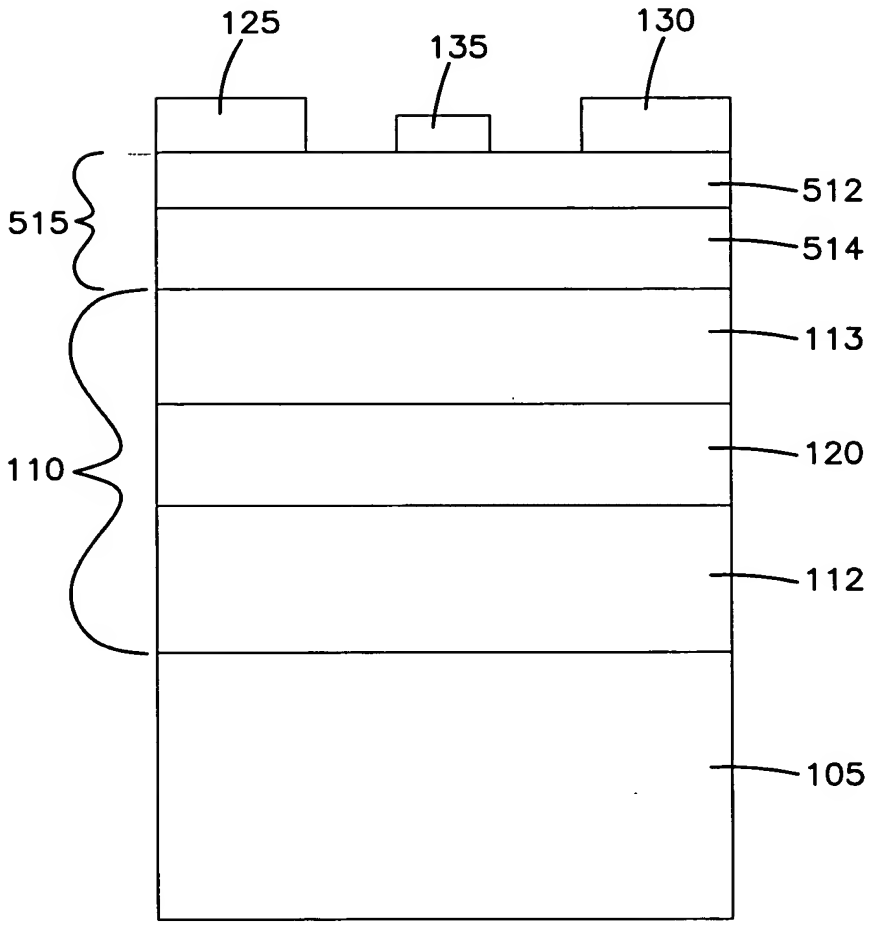


FIG.6

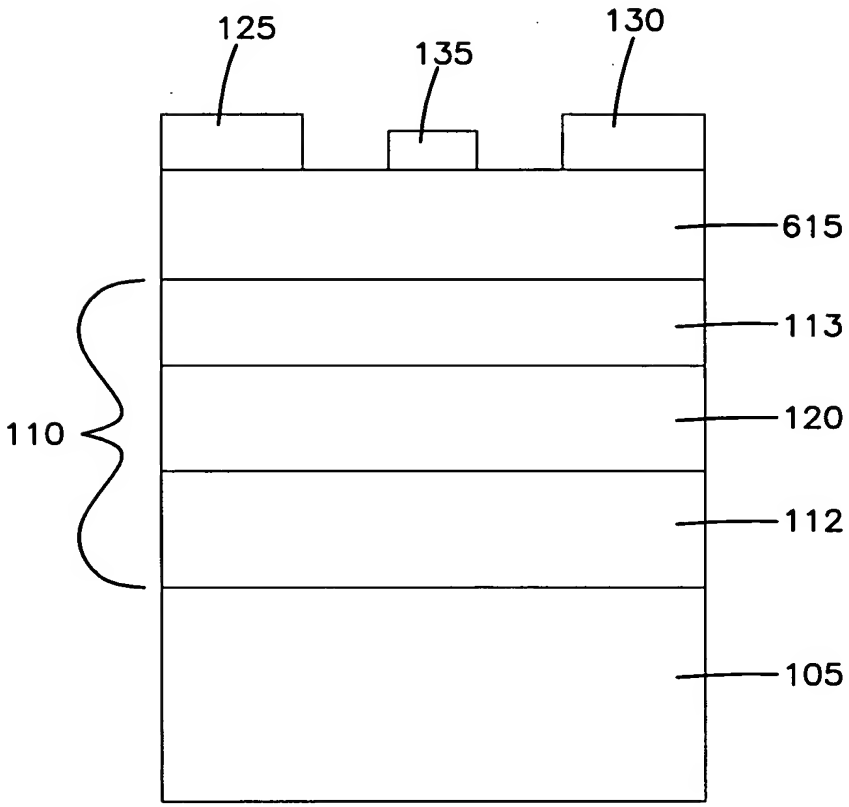


FIG. 7

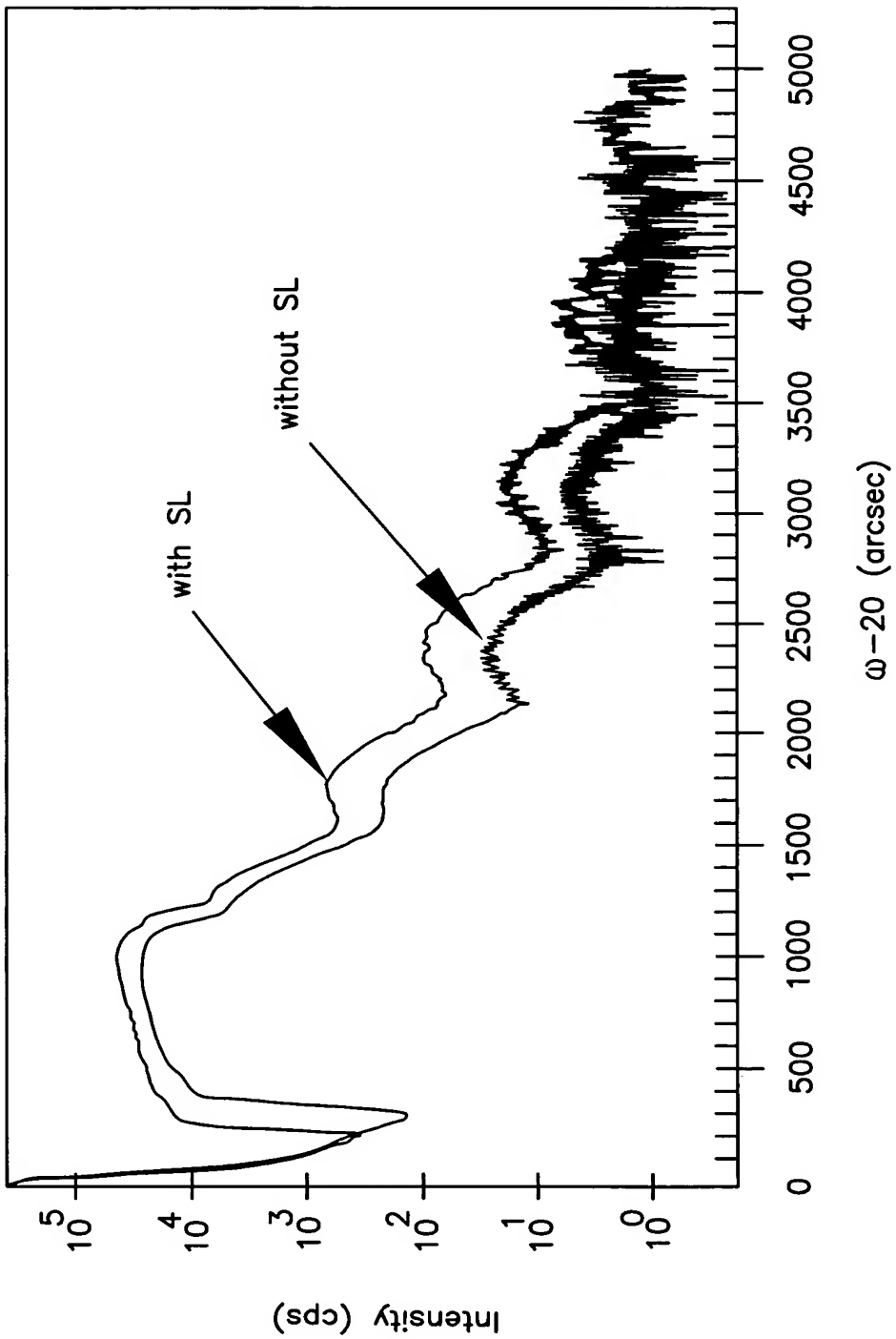


FIG. 8A

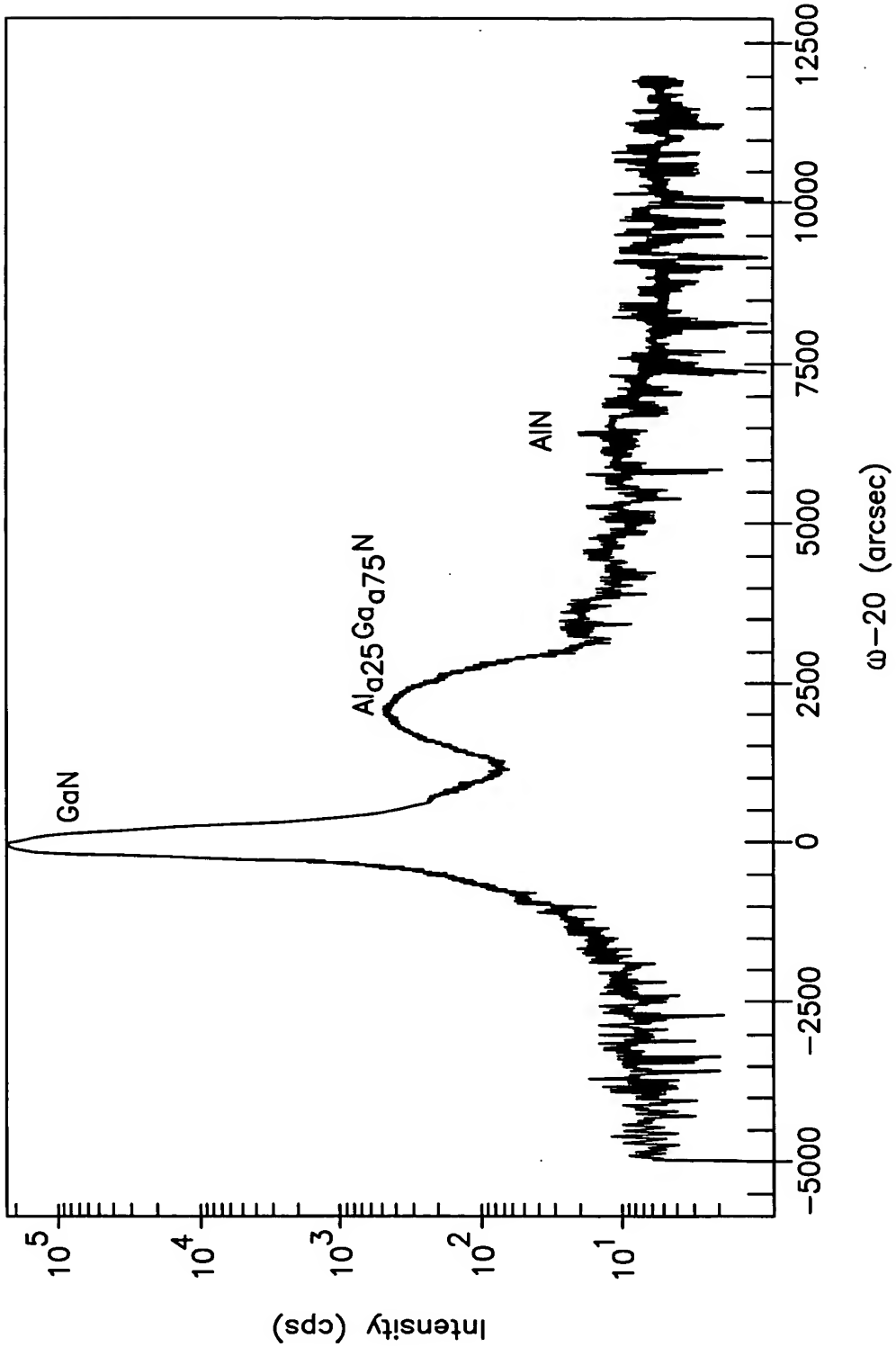


FIG. 8B

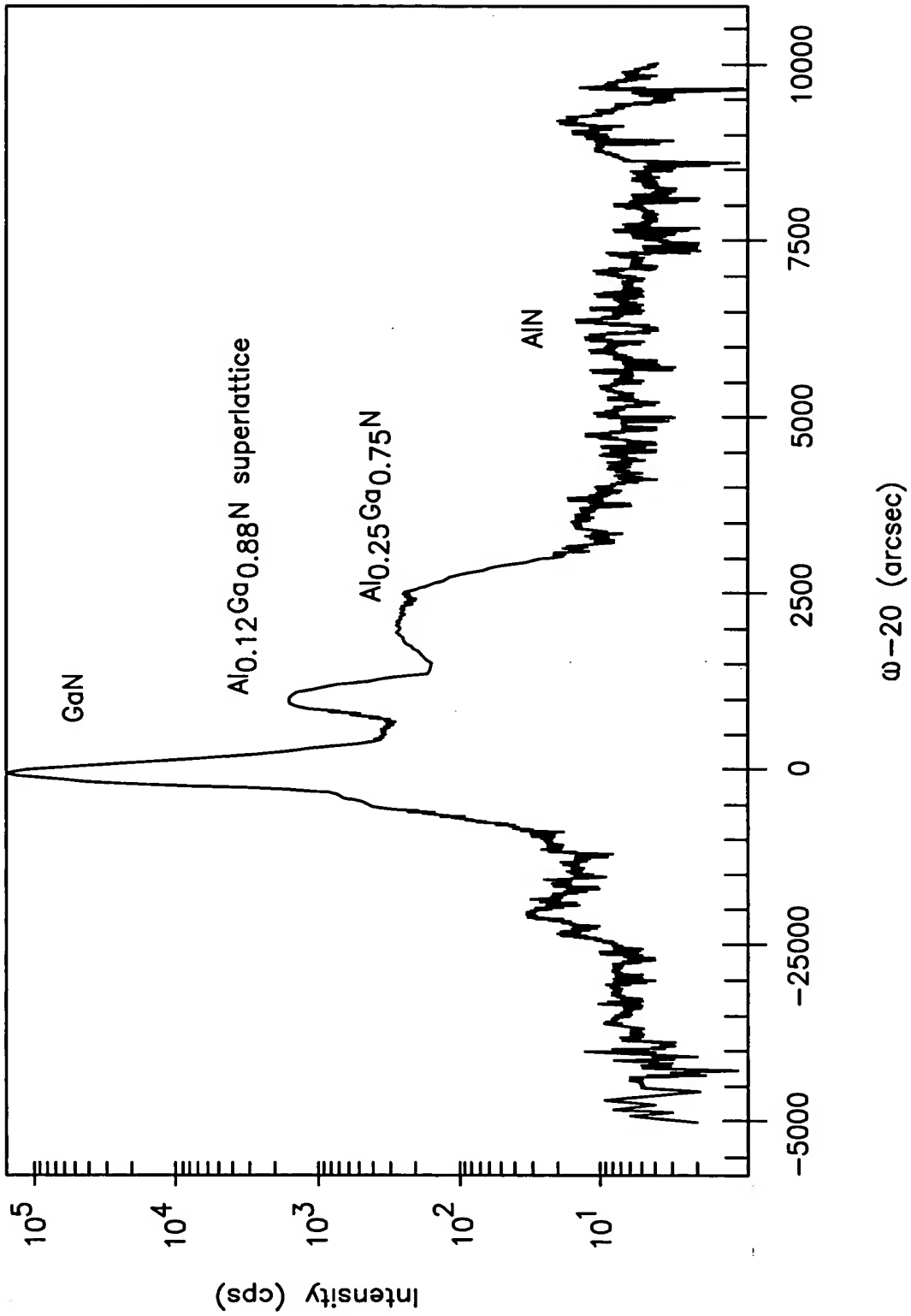


FIG. 9

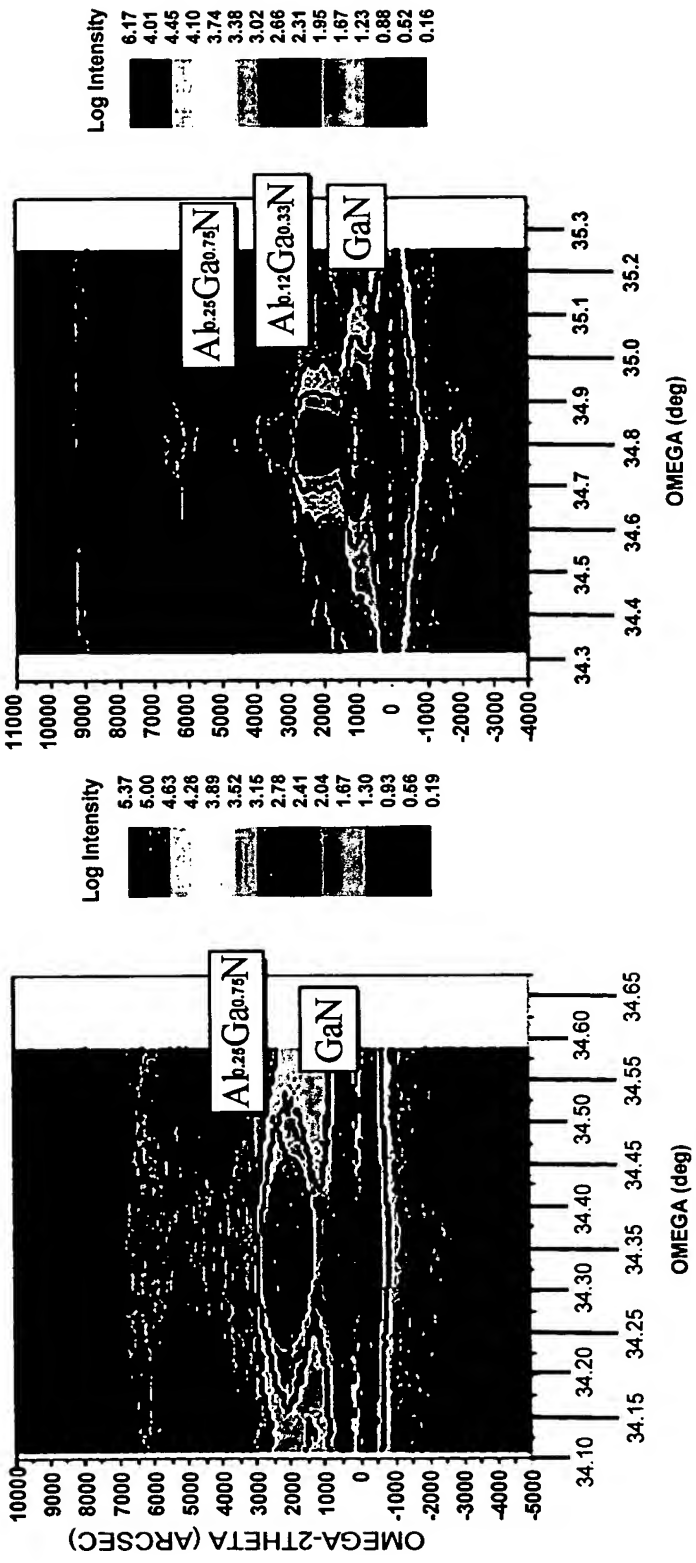
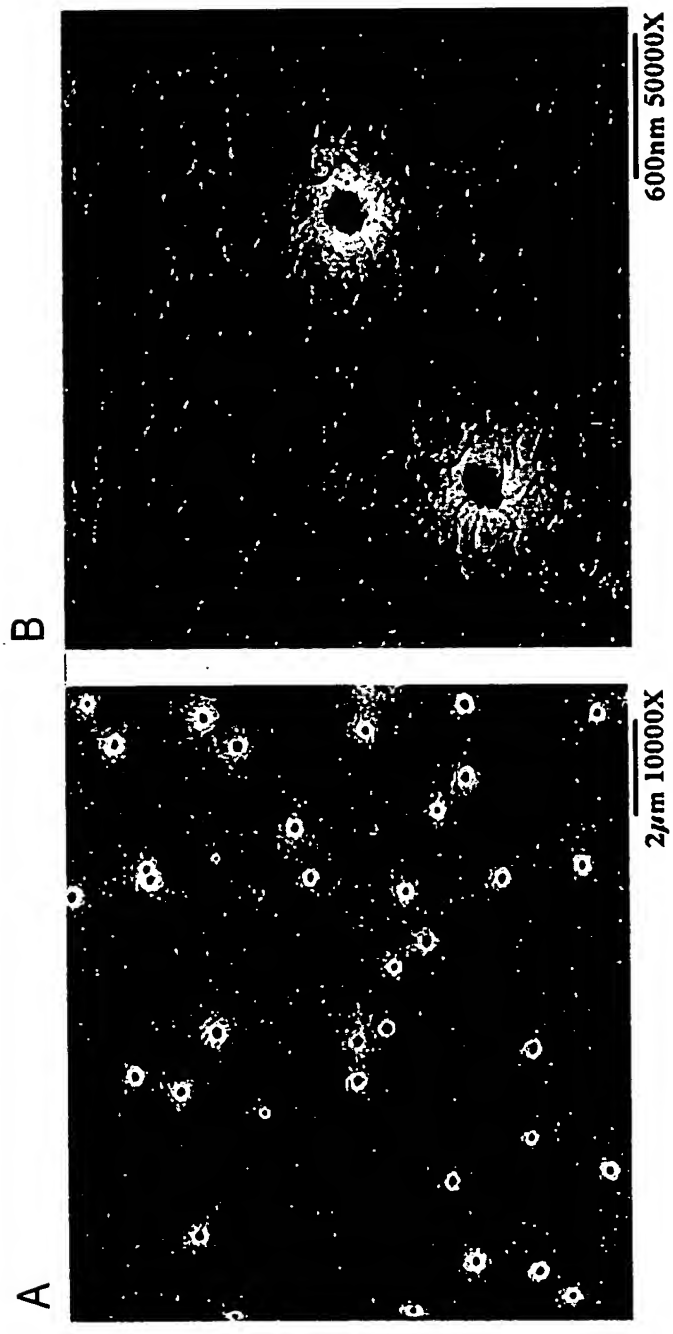


FIG. 10



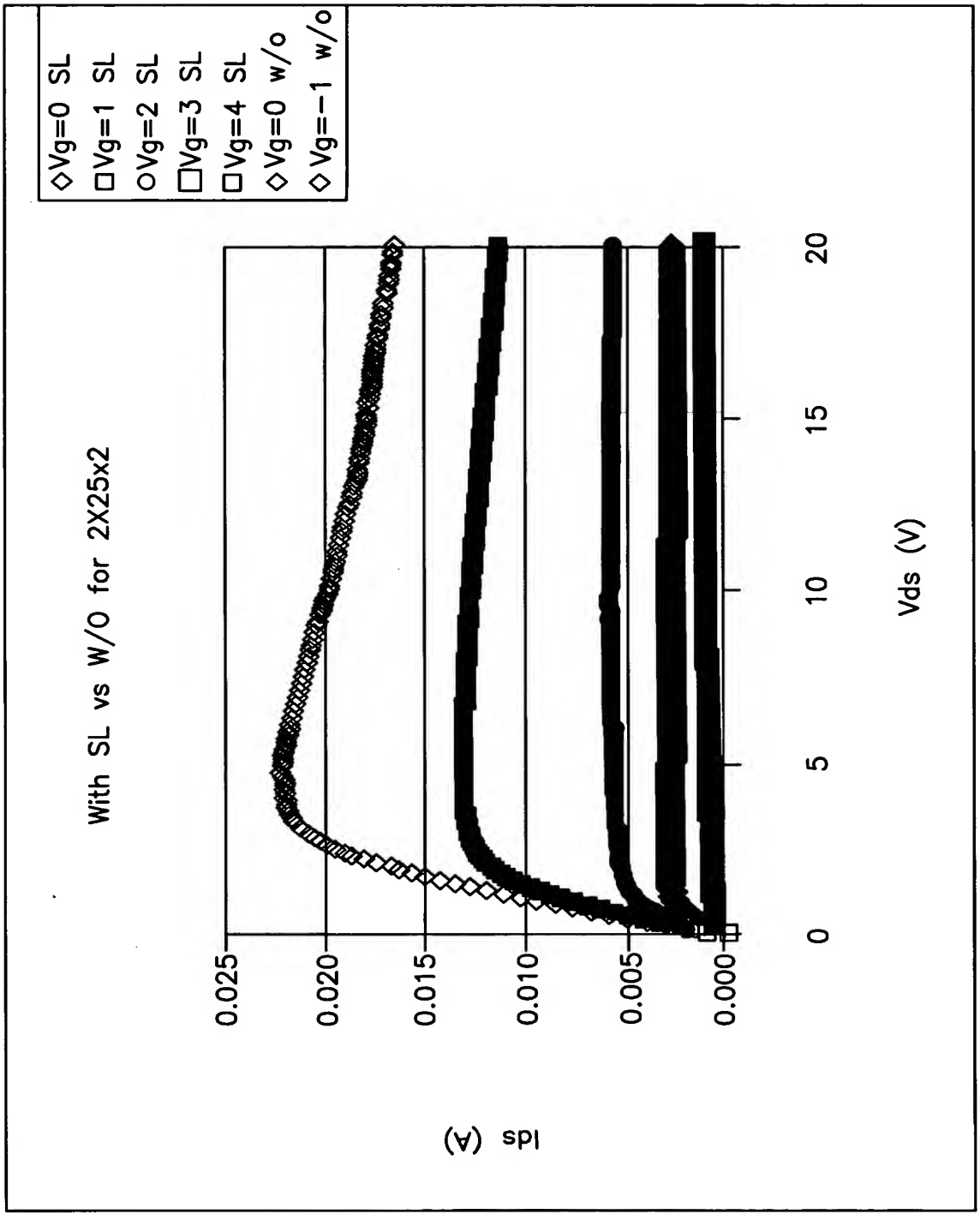
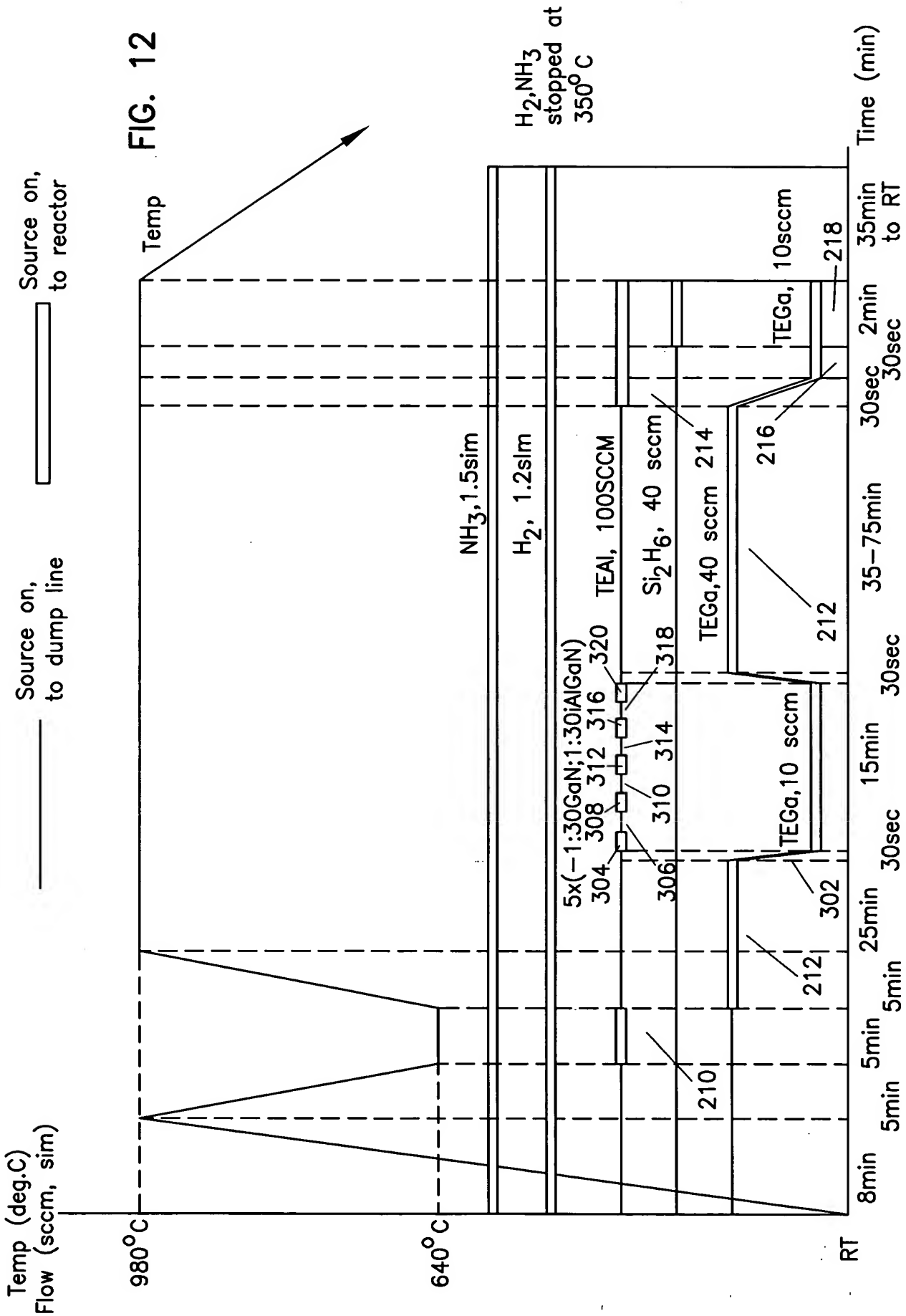


FIG. 11

FIG. 12


Temp (deg.C)
Flow (sccm, sim)
Source on, to dump line
Source on, to reactor
Temp
980°C
640°C
RT
Time (min)
H2,NH3 stopped at 350°C
NH3,1.5sim
H2, 1.2slm
TEAl, 100SCCM
Si2H6, 40 sccm
TEGa,40 sccm
TEGa,10 sccm
TEGa, 10sccm
5x(−1:30GaN;1:30iAlGaN)
304
306
308
310
312
314
316
318
320
210
212
214
216
218
302
8min
5min
5min
5min
25min
30sec
15min
30sec
35−75min
30sec
2min
30sec
35min
to RT